IOWA
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HIGHWAYS CLAIM 284 DEER IN 1956

SAFETY IS SENSIBLE

Summer is a time of change. The ull, drab and dead surroundings f winter turn into the bright reen of summer's new growth. It s fine to be out-of-doors and a part f the new awakening dormant life n field and forest, lake and stream. ummer is a grand time to be alive —yes, alive!

Please take that "being alive" oth literally and figuratively, be- ause the Water Safety Congress s vitally concerned with drown- ngs. Spring, we realize, also narks the beginning of the heavy sage of lakes and streams for ecreational purposes, and statis- ics prove that all too many people vill drown before 1957 is out.

The Water Safety Congress in eality is the result of a problem, a big one. This problem, that of lrownings, still is with us.

Water, like fire, is one of man's greatest blessings. Water, in fact, s a necessity of life. Yet, also like ire, it must be handled with care nd respect. It can, and does, cause damage and loss of life.

People probably will drown as ong as they work and play on the vater. People living along sea coasts and near Great Lakes, how- ever, know and respect the water. Water wisdom has been passed along from generation to genera- tion and drownings are held to a minimum.

Creation of new, huge lakes in the South by federal governmental agencies and private groups since the early '30's, however, has pre- sented a new problem. Inland peo- ple suddenly were given access to new and great water areas without the benefit of safe utilization of them. Almost simultaneously, peo- ple found themselves with more leisure time, greater incomes than prevalent during the "depression daze", improved mode of trans- portation and other incentives to use these lakes for fishing, boating, hunting, picnicking, and a multi- tude of other recreations. Without the benefit of experience, many people were reckless and fool- hardy. The result was a sudden upsurge in drownings — and the

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Autos killed 284 deer along Iowa's highways and roads during 1956. Motorists can help cut this number by making a mental note of areas where they see deer cross arteries of travel. Since they often use the same crossing day after day, a relaxation of speed in these areas will reduce danger to wildlife and damage to autos.

CANOEING THE SHELL ROCK RIVER ALBERT LEA TO NORA SPRINGS

Ralph Church and Harold Allen

The Shell Rock has its source in Albert Lea Lake at Albert Lea, Minnesota, and joins the Cedar about five miles north of Cedar Falls. Its entire length of about 100 river miles is navigable by canoe with a little wading now and then to negotiate shallow riffles or to pass fences. The bottom is sand and limestone rubble and for miles on end the banks are open, park-like meadows. Beautiful campsites are everywhere, but as usual on Iowa streams you must carry your water for drinking and cooking.

From Albert Lea Lake to the point where Highway 65 crosses the river 2¼ miles south of Northwood, Iowa, the river passes through flat marsh and meadow land. The current is not strong and the water will probably average between one and two feet deep. A convenience for those who do not wish to camp out is that you can spend one night in the motel south of Northwood, float all day and arrive at the back door of the motel again at about dinner time. On our early June trip we were immensely entertained by the broods of mallard ducklings in the marshy areas, and were nearly run down on two occasions by deer crossing the river.

From the Highway 65 bridge south of Northwood to Nora Springs is the best canoeing water on the river, everything considered. The limestone rock country is entered a short distance below the highway and the valley becomes progressively deeper as the river proceeds east and south. The bottom is predominantly rock, as are the banks. The current speeds up perceptibly and becomes quite strong between Plymouth and Nora Springs. This latter stretch, from Plymouth to Nora Springs, struck us as being the best practice water

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Paul Leaverton
Superintendent of Game

This special report has been prepared to show the distribution of Iowa deer killed by methods other than hunting.

A record of deer killed by dogs, automobiles, trains, illegal hunting and unknown causes has been kept for the past six years. This information is reported to the Game Section by conservation officers at regular monthly intervals. Separate report cards indicate the date killed, time of day, county, township, age, sex and weight of the deer, cause of death and estimate of damage if killed by automobile.

From the table below there appears to be a correlation between the number of deer killed by cars and other causes to the size of the deer population. In addition to population levels, topography, condition and character of highways and other factors that influence speed and visibility of drivers, etc., must be considered.

It was also observed that the highest loss by cars was in the month of November, the rutting season. There has been a tendency over the past several years toward higher kills with high deer populations and diminishing kills with lower populations. This has held true without exception until the 1956 season.

Last year there was a considerable increase in the number of miscellaneous deer killed other than by hunters. We are not sure what caused this situation. It may have been a series of factors. The hunting season was reduced to two days and this, coupled with a cold, disagreeable opening gun season

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IN THIS ISSUE

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STREAM-SIDE ROD REPAIR

John F. Clark

There's no getting away from it. Sooner or later every angler has the sad experience of having his long awaited fishing trip spoiled because his rod literally fell apart at the seams, and unless he has a spare rod in the car or at the cabin, he might just as well head for home.

It's pretty amusing when you stand back a ways and look the situation over. Most every angler will carry plenty of spare hooks, sinkers, flies and lures. A lot of anglers carry a patching kit for their boots or waders. But, when it comes to the most important item of their fishing gear, the rod, not one angler in fifty will have anything to make a temporary repair.

It's an inexpensive proposition to get up a small repair kit that will handle just about any emergency that comes along.

Some of the things that could and often do happen to a rod are: The tip guide breaks off. Ferrules come unglued. Those old guide wrappings that you haven't changed in years finally give up the ghost and there you stand with only a couple of guides on the old stick. In your eagerness to get to the stream, you close the car door too soon and end up with a four-piece rod.

To the average angler any of the above mentioned situations would be a major catastrophe. It would usually mean a one or two hour drive to the nearest rod mechanic. Since most fishermen find time to fish only on the weekends he would discover that all the rod mechanics had taken to the hills to their favorite stream. That leaves only one course open; the nearest gin mill. Naturally he won't catch many fish there, but in an hour or so it won't make much difference.

Carry Repair Kit

All of this chaos and confusion could easily be eliminated if every angler carried a small repair kit. All of the above mentioned repairs could be accomplished with the following items in a small plastic box: spool of rod winding thread, ferrule cement, couple of feet of leader material, small roll of tape, piece of emery cloth, waterproof box of matches, extra butt and tip guide, an assortment of snake guides, small bottle of color preservative.

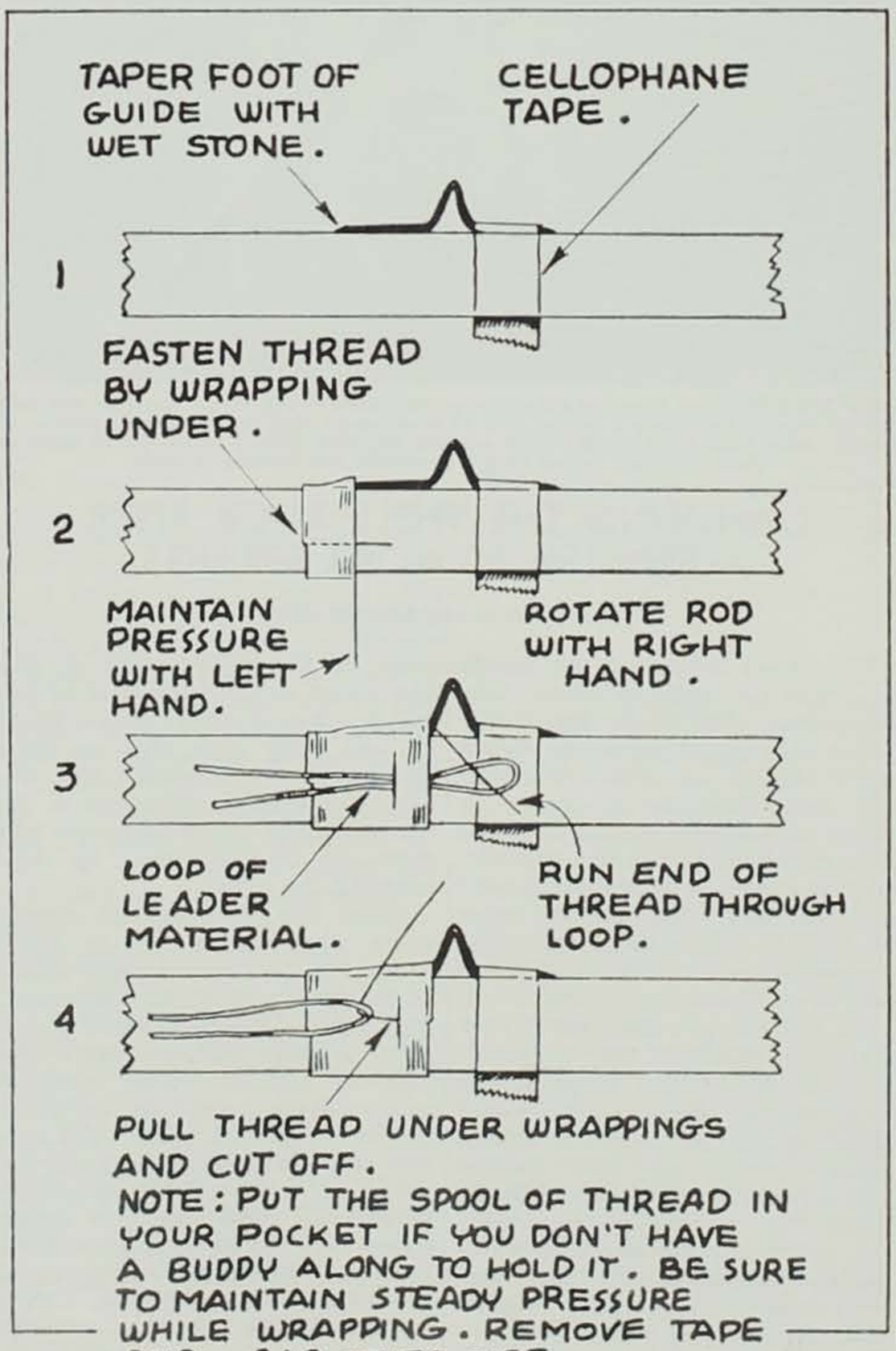
Now, let's take these emergencies one at a time and see what can be done.

Broken off tip guide. Usually a small section of the rod tip remains with the guide, so rather than spend a lot of time trying to get it out, replace it with the spare that you carry in your kit. When you get back home you can get this broken section out with a small drill. Sand down the rod tip with emery cloth until the new guide fits snugly all the way down. To do a good sanding job, hold the emery cloth between the thumb and forefinger of your left hand and rotate the rod section with your right hand. This prevents the rod from getting out of round. Then, heat and apply a small amount of ferrule cement to the tip. While it is still hot slip on the guide making sure that it lines up with the rest of the guides. Push it down as far as it will go. Peel away the excess cement that oozes out when you push the guide down.

Ferrule cement has a bad habit of drying out after a couple of seasons. No doubt many of you have had the experience, when in the process of casting a fly to see one or two rod sections flying through the air. The cause is simple; the cement has dried out, and in the act of casting you crack and weaken the bond between the ferrule and rod thus letting the rod sections take off like a bird. It's quite an easy job to reglue the ferrules. First off, scrape away the old cement with the edge of a knife blade.

A WORD OF CAUTION. Be careful not to scrape away any of the rod material. Otherwise your ferrules will fit too loosely and make a good repair job almost impossible. Next, heat and apply a thin coat of cement to the rod, and while it is still hot, push the ferrule on. If the cement should happen to set before the ferrule is all the way down all you need do is reheat it with a match. Peel away any excess cement that oozes out.

Ever see the buttons pop off a fat man's vest when he overexerts himself? Something similar happens to rod guides, especially if the wrappings are old and worn out. And come to think of it, doesn't it usually happen when you're tied into the lunker of the season? Year after year the same anglers turn up along the streams with rods on which the guides are held in place with anything from a rubber band to a piece of cellophane tape. The job of rod wrapping isn't nearly as complicated or mysterious as it appears. The first step is to remove all traces of the old wrappings. Then sand this spot lightly with the emery cloth. Place the new guide on the rod and hold it in place with a piece of tape. (See drawing.) Be sure it lines up with the rest of the guides. Follow the step by step drawings to wrap the guides. After the wrapping is completed give them a couple coats of color fixative. This will protect them until you get home where you can apply a couple coats of rod varnish.



Broken Rod

Busted rod? Well, buddy, you've just about had it, because there are only a few cases in which you can make an emergency repair in the field. If your rod is bamboo and the break is splintered rather than broken off cleanly, you can proceed as follows: force the splintered pieces back to their original position. Then wrap the entire break with thread. Start wrapping an inch or two before the break and continue wrapping an inch or two beyond it. Keep the thread as tight as possible. Give the wrapping several coats of color preservative.

If your rod should break off close to a ferrule a repair can usually be made. First remove the broken section from the ferrule by heating it with a match. The broken piece will slide right out. In the case of a male ferrule, I would like to give you a word of warning . . . **DON'T POINT THE FERRULE TOWARDS ANYONE WHILE YOU HEAT IT,** because the hot cement will build up quite a bit of pressure and the broken piece will fly out like a shot from a gun. Next, scrape and sand down the rod section so that the ferrule will fit snugly. In the case of a butt section the ferrule will be slightly undersize, due to the taper of the rod. This will necessitate removing a little more material than you normally would. Naturally this will weaken the rod to a certain extent, so go a little bit easy on that lunker. Just the opposite is true with a female ferrule. The ferrule will be slightly oversize and might require the addition of a shim to make it fit snugly. After the rod is sanded down to size, heat and apply a thin coat of cement. While the cement is hot, force on the ferrule. The whole operation shouldn't take more than a half

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"THERMAL STRATIFICATION": ITS EFFECT ON FISH AND FISHING

Roger Reed and C. Robert Glover

Just as molasses, water and oil laced in the same container would orm three distinct layers, the vater in many of our lakes during ertain periods of the year, because f temperature variations at dif-erent levels, stratifies and presents hree equally distinct layers. And he character of the water in rela-ion to oxygen content in each lay-r is remarkably different.

To most fishermen, lake stratifi-ation comes as a new complication o an already complex art of sepa-ating a fish from its elements. Nevertheless, an understanding of t and the use of knowledge thus ained, would not only increase heir catch, but could explain why, luring late summer in particular, heir deep fishing produced nothing nore than fresh air and exercise. On such occasions, instead of their ures or bait moving through the ccupied haunts of deep dwelling r bottom hugging species, the usiness end of the lash-ups were eing trolled or set in a veritable iological desert. And that is an pplicable reference because the vater's content of dissolved oxygen n the depths was very probably .0 parts per million, hence neither ish nor any but a very few animal rganisms could have been living n it.

To the limnologist—one who en-gages in the scientific study of lakes and streams—the circum-stance is well known and labeled "thermal stratification." Any lake of a depth of 30 feet or more is almost certain to present this phe-nomenon. It occurs in summer and winter and will prevail until fall or spring weather conditions alter water temperatures, which n turn bring about a complete mix-ing of the lake's water. The dura-tion of the stratification in sum-mertime is described as the "summer stagnation period."

Thermocline Defined

In the terminology of the lim-nologist the bottom layer of this stratification is known as the "hy-polimnion." "Thermocline" is his label for the middle layer, and the top, or surface layer, is known as the "epilimnion."

The location of each layer, its position in relation to depth and its thickness can easily be de-termined by the limnologist and fisherman alike through tempera-ture readings at progressively greater depths.

For the first 20 to 25 feet or thereabouts, there would be little temperature variation. This area or layer is the epilimnion. Below that level, however, the tempera-ture will drop about 2 degrees every yard of depth. The depth at which this rate of temperature de-crease starts is the top of the thermocline. The bottom of the thermocline will be at that depth where this rate of decrease ceases. From this point to the bottom of the lake will be the hypolimnion, wherein the temperature will drop to no lower than 39.2 degrees—the temperature at which water reaches its maximum density or weight, except under extreme pres-sure. The latter is a rarity, of little concern to the limnologist, of no concern to the fisherman.

Coincidental with increasing depth and a corresponding drop in water temperature, will be lessen-ing of the water's dissolved oxygen content as the season progresses. (See Figure 1.)

To the fisherman schooled in the fact that colder water can retain more oxygen, this may seem con-tradictory. Under normal circum-stances, the oxygen saturation point of water, and invariably the amount of dissolved oxygen it con-tains, does decrease as its temper-ature increases. The bubbles which form and rise in a pan of water as it is being heated are a graphic example of such oxygen loss. They are bubbles of oxygen being freed as the temperature rises.

When the air is relatively calm, the depth of the respective layers will be constant all over the lake. High winds, however, will alter the situation as shown in Figure 2. Other circumstances that would affect an alteration, but to much lesser degrees, would be (1) a sud-den change in barometric pressure over a portion of the lake area, (2) earthquakes, (3) landslides, or (4) very heavy rainfall at one end of the lake.

In no event, however, does this tilted condition remain once that state of affairs that caused it ceases to exist. When the "blow" is over, the levels will see-saw or alternately rise and fall on opposite shores, but stabilize quickly.

In the early part of the year, just after the ice cover leaves the lake, all of the water in it is of uniform temperature and oxygen content at all depths. A similar circumstance exists in late fall. In the early spring, the oxygen saturation point of the lake's water may be reached or exceeded. As stratification takes place due to the higher spring and summer temperatures, this uni-form oxygen content remains only until an oxygen demand is exerted by fish and decaying vegetation. This oxygen demand explains the seeming contradiction referred to above.

Wind, Wave Action

In the epilimnion, or top layer, this demand is countered by re-placement as a result of wind and wave action, by oxygen producing plants, and to a lesser degree by rainfall. The oxygen is distributed throughout the epilimnion by cir-culation set up mainly by the wind. That circulation is confined to the epilimnion by the upper level of the thermocline. That level is as effective a barrier between the less dense, warmer water of the epi-limnion and the older water of the thermocline, as a solid substance would be. Only violent elements would cause a variation in this feature. The thermocline and the hypolimnion therefore are denied oxygen replacement.

Therefore as oxygen in these lower levels is consumed, those levels become less and less capable of supporting fish life. Oxygen depletion to a point of non-ex-istence could take place by oxygen producing plants, any level in the hypolimnion depending upon the quantity of decaying matter that settles from the surface layer. Any fish in those depths therefore are forced to shallower levels. This depletion proceeds upward into the thermocline. If the summer is sufficiently long or the demand of oxygen is accelerated by (1) an abundant fish life or (2) the pre-sence of much matter subject to decay, it could extend to the top level of the thermocline. When this happens, no fish will be found below that level.

It is logical to assume, therefore, to fish below the top level of the thermocline is a waste of time, re-gardless of the species being sought. If the angler is trolling, his lure should not be allowed to drop below that level. The same applies to the set of bait, whether it be for the game species such as bass, walleyes, or the pikes; or the panfishes such as bluegill, the crap-pies, yellow perch and catfishes; or for the bottom feeding suckers and carp.

Some very deep mountain lakes do constitute an exception to a complete absence of oxygen in their extreme depths. Though these are sufficiently rare to war-rant little consideration on the part of the angler, they must be

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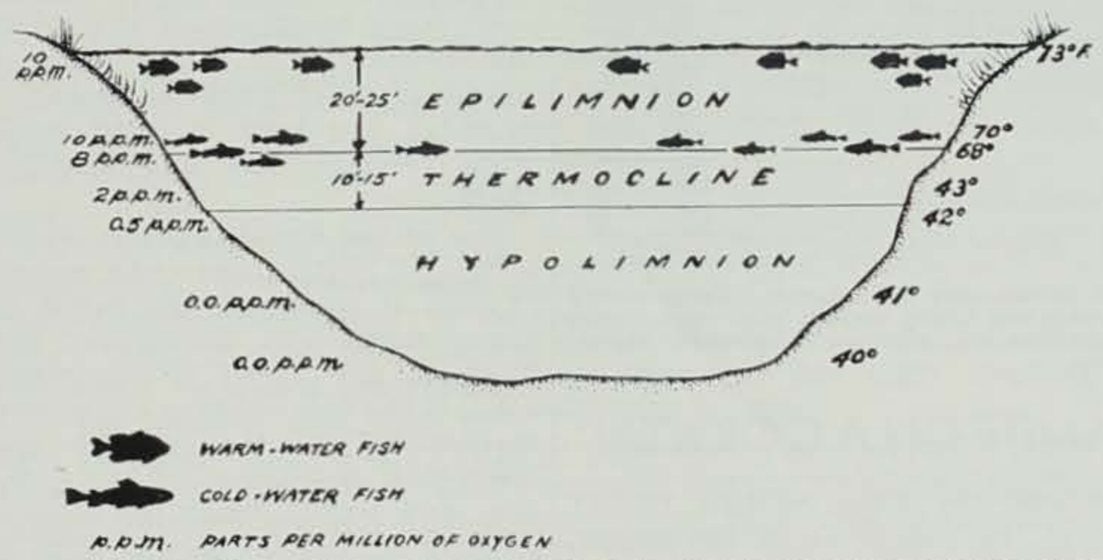
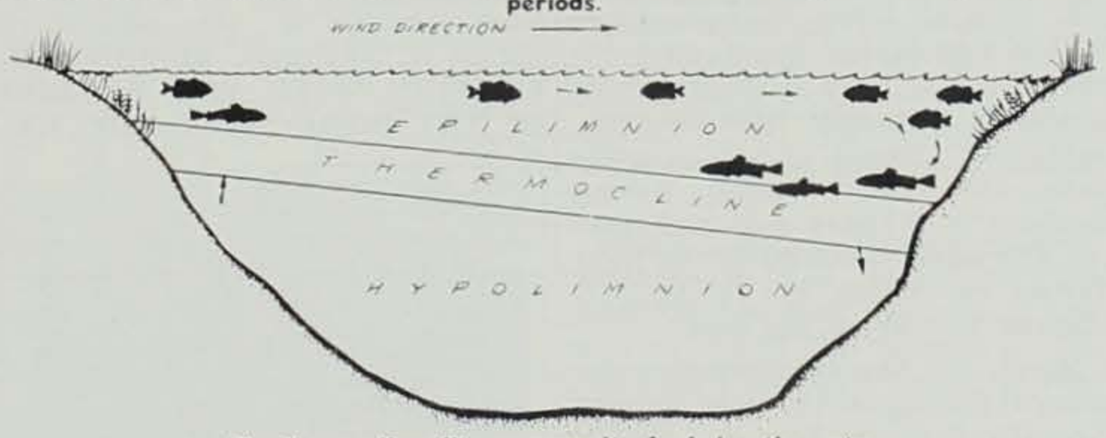
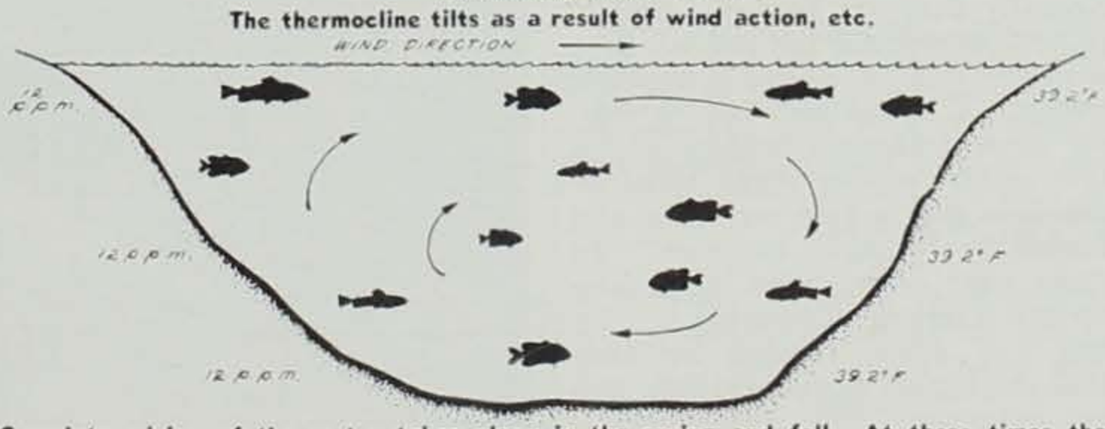


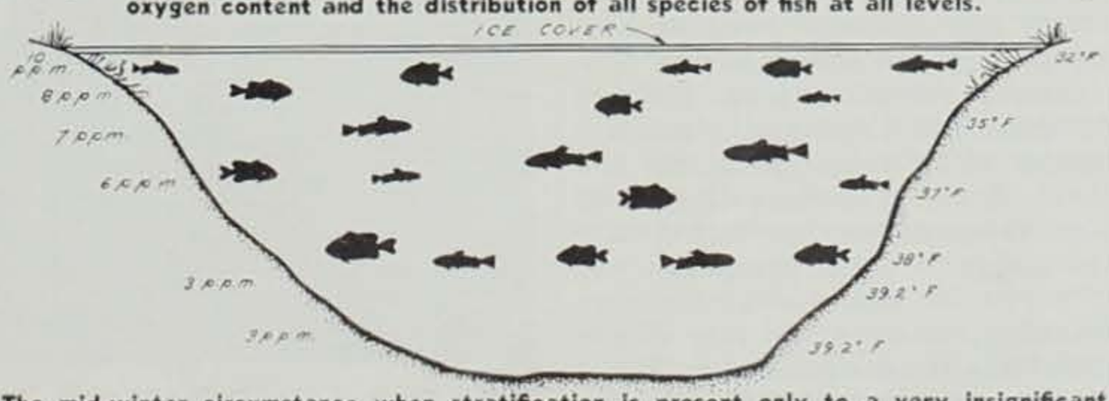
Cross-section of a typical lake, showing positions of various fish species during stagnation periods.



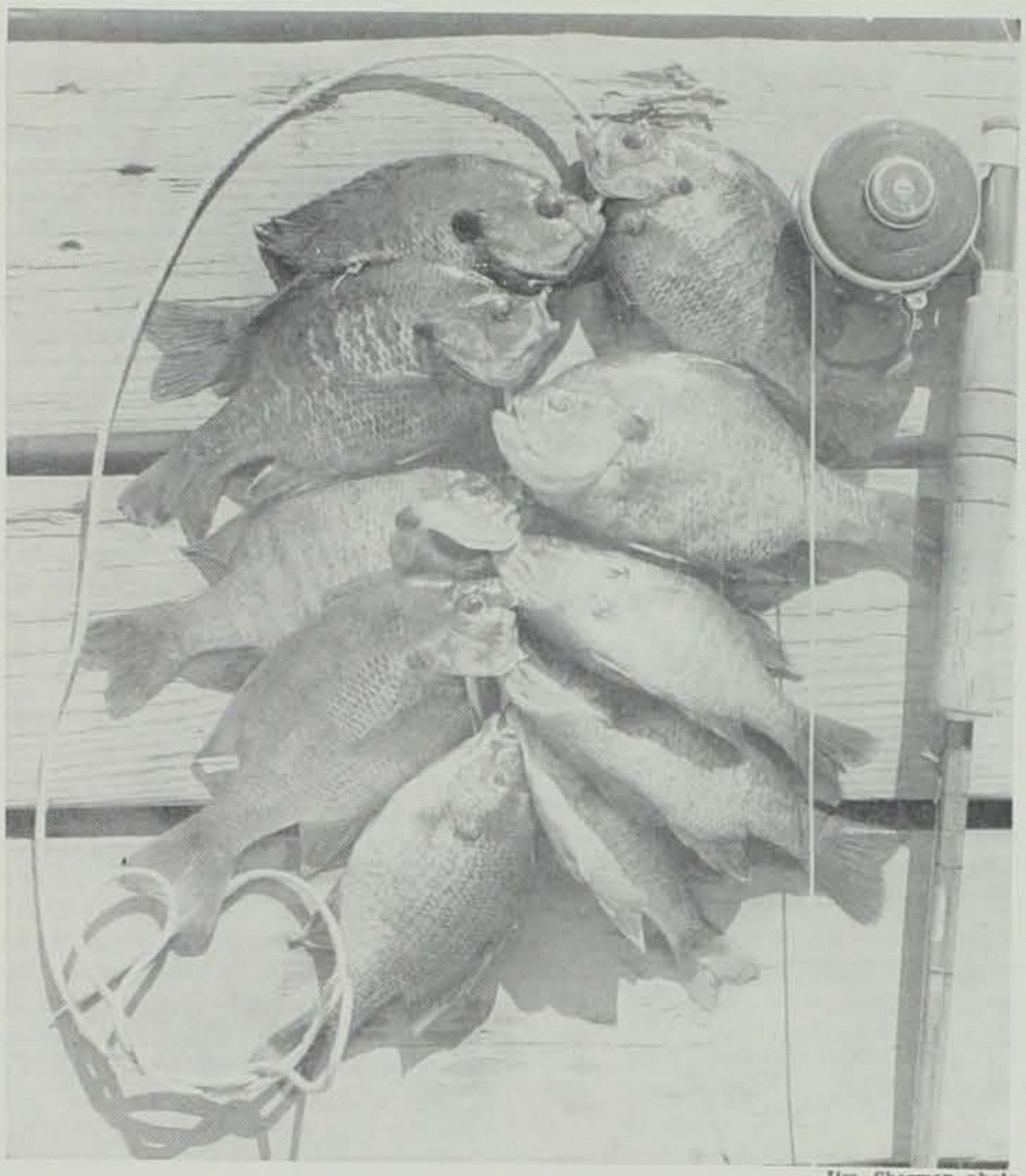
The thermocline tilts as a result of wind action, etc.



Complete mixing of the water takes place in the spring and fall. At these times the lake is undergoing the respective overturns. Note uniformity of temperature and high oxygen content and the distribution of all species of fish at all levels.



The mid-winter circumstance when stratification is present only to a very insignificant extent. Note warmer water, though denser, of lower oxygen content at bottom. As described in the text, this status is referred to as inverse stratification.



Jim Sherman photo.
More and more Iowans are turning to bluegill fishing with light flyrods. These gamey fighters are numerous in Iowa lakes and farm ponds and taking them is good conservation practice, keeping fish populations and competition for available food more ideally in balance.

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IOWA BLUEGILLS: "DYNAMITE ON A COBWEB!"

Keith C. Sutherland, Editor.

There's a growing fraternity of Iowans that are daily revising limits of their physical and emotional endurance—they are the increasing legion of anglers who are being drawn to bluegill fishing with flyrods.

Once smitten by the "bluegill bug," individual members of this fellowship are likely to display rather boldly the symptoms of the malady. These include sleepless nights, a burning urge to rise at unusually early hours, and an amazing ability to forego meals until well after dark.

When bluegill fishing is at its most productive best, the obsessed angler is likely to spend his office hours in a frantic search for an excuse to leave its responsibilities behind. At home, as every wife knows, he's worse—cartwheeling nerves on end with his constant pacing until the green light is held aloft and he is free to gather up his gear and steal away to his favorite bluegill pond or lake.

Such reactions are fitting and proper credit to the lightning-quick scrappy fellow with the dapper blue spot on the gill cover which, quite logically, gave him his name.

The reaction is quite natural, too, for when the bluegill is on the feed, action comes with authority and regularity matched by no other species in my recollection. And, if this be satisfying to the angler, then, when he is delivered up golden-brown to the table, he scores one final decisive victory over the yearnings of the palate.

What a pity then, that the bluegill, with all these characteristics to his ever-lastin' credit and his abundance in Iowa lakes and farm ponds, it has only been in comparatively recent years anglers have cast aside "still" fishing methods with heavy rods and sinkers and have "graduated" to light flyrods on which the bluegill is allowed to display his best!

What are the requirements for bluegill fishing on the light flyrod? Actually they are few and simple. In fact, except for the rod, all that is needed can be carried in a single pocket. A flyrod and reel, a supply of fine tapered leaders and a few small "popper"-type lures or dry flies and a few wet flies and you're in "bluegill business." In these next paragraphs we'll take up the items of equipment one by one and some angling methods that the author hopes will help you get enjoyment from the sport.

First, the flyrod. Length, weight, action and material used in construction of the flyrod, are all considered in selection of this piece of equipment and are pretty much a matter of individual judgment and taste. I would make this general observation about choice of the flyrod and reel. Light equipment will give you the most sport but, above all other considerations, choose well-balanced equipment. It's a blessing in terms of personal comfort to the angler and will permit hours of casting without tiring effects. Your fishing friends or favorite sporting goods store can help you select a well-balanced outfit.

I have been given the impression by some, mostly in the "beginner" angler class, that their reluctance to take up the flyrod is because the use of this piece of equipment looks too complicated and they fear mastery of it is not within their power. This notion should quickly be dispelled.

Ability to use the flyrod with the skill of a champion cannot be learned in a few hours, of course, but operation of the flyrod—good enough to take most fish, including bluegills—can be learned in a matter of minutes!

Skill in laying out a fly long distances and with pin-point accuracy takes long practice sessions with ideally balanced equipment. Those sessions can occupy your spare hours in the backyard. And if practice should be neglected here, you'll be surprised how much improvement you make after a season or so of weekend fishing—provided you keep in mind some basic fundamentals and practice them.

Use of the flyrod is pretty much a case of rhythm and once proper rhythm is mastered, the battle is pretty much won. Position of the hand on the flyrod is important for it is the link between the power transmitted to the rod by the downward movement of the forearm and wrist. Place the thumb directly on top for it will have a vitally important role in transmitting power on the downward thrust of the flyrod. **REMEMBER, CASTING WITH THE FLYROD IS NOT DONE WITH THE ENTIRE ARM OR WITH SHOULDER MOVEMENT, BUT WITH THE FOREARM AND WRIST ONLY.**

With a fast upward lift of the rod with the arm bending swiftly at the elbow, assume a position of 12 o'clock noon with the cocked arm. Here proper rhythm comes into play. As the line lays behind, hold the cocked position of the arm an instant before moving the arm forward. Now, begin the forward motion of the forearm to carry the line forward. At the nine o'clock position, bring the wrist and thumb into play, briskly putting extra power into the forward cast.

Rhythm of the cast and leaning to pause at the top of the cast will come with a little practice and patience. You may not sense it right at the beginning, but after a little practice you will become aware of a faint "tug" when your line has evenly layed out and has reached its maximum distance behind. This is the signal to begin the forward action of the forearm and wrist.

Distance that you are aiming for is achieved by "false" casting or stripping line from the reel until the line needed to reach the distance you desire is reached. In "false" casting, line is kept in the air until the distance you want is reached, then it is layed out. "False" casting also calls for a certain amount of rhythm which must be incorporated into the rhythm of the cast. It also will be accomplished with a little practice.

Types of fly lines also are a matter of personal preference but their very construction dictates what can and cannot be done with them. Either level or double-tapered lines

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Jim Sherman photo.
Working edges of weed beds with small "popper" type lures is one of the most effective ways of taking bluegills. Their audible "pok" when they strike and circling battle make bluegills preferred angling by many flyrod fishermen.

ALL ABOUT WIVES

In the course of a couple of eeks, a number of letters arrive ere asking all sorts of questions out hunting and fishing but save s, Hannah, if the toughest one of l didn't come in a few days ago.

"How," asked this tortured correspondent, "do you get away om your wife to go fishing?"

Naturally, this fellow didn't sign is name. This is one of the few mes that a newspaperman can spect anonymity. We want no ruised readers.

But how to answer the quesion? Well, I went to a few fishng friends for advice on this crital matter and here are their soluons. You take your pick as it uits your particular problem.

One fishing buddy says he uses ne "sneaky approach." He keeps ll his fishing tackle in the trunk f his automobile. When he wants go fishing he simply goes dictly from his office, bypassing is home altogether. This "sneaky" ystem has definite disadvantages, owever, because sooner or later ou have to go home to find the ttle lady standing four-square in ne doorway, usually snarling. If ou've caught some fish, you're oubly lucky because you can roudly display them and proclaim riumphantly, "I've been fishing." ut if you haven't caught any fish, rother, you're in trouble, and how ou get out of that situation is our business.

Another friend says he uses the direct approach." He goes directly home and announces in a rm, authoritative tone: "I'm going fishing!" This is a commendble approach—forthright and onest, but it has a singular disdvantage, according to my friend. t usually fails. His wife always eplies: "No, you're not." And hat's that.

"Sneaky System"

Then there's another version of he "sneaky system." Under this lan you go right home after work, ut the first time your wife turns er back, you snatch the fishing ackle and take off for the lake. One caution on this one, however. Keep the fishing tackle in a readily ccessible place where you can nake a quick grab. I'm told that vives quickly wise up to this lodge and often put lawnmowers n front of the door for you to trip ver on the way out.

Another friend has had considerable success, he claims, with 'the tired husband" approach. When he gets home at night, he drags around the house; limits conversation to a few words; rubs his eyes; sits with his chin in his hands. This all leads the good wife into the trap of asking, "Tired dear?" And friend fisherman answers, "I certainly am—very tired. It's been a tough day." Right here you must be careful. Don't leap right into a suggestion that going fishing would help. First, pause a few moments. Then say casually, as though the thought just occurred to you, "You know, I think I'll go fishing. It might relax me." You've now reached the crisis. In all honesty, we must warn you that this system also is fraught with danger. Some clever wives—and have you found any that aren't clever?—will change this system into one of complete disaster. They might say, "Well, dear, if you're so tired wouldn't it be more relaxing to have some friends in for a game of bridge?" You're sunk. If this disaster befalls you, abandon the "tired husband system" immediately.

"Buddy Dodge"

One of the most successful of all systems for getting out of the house for a fishing trip is the "buddy dodge." This is a clever refinement of the "tired husband" approach. Under the "buddy dodge", you first must have a trusted friend who's a fisherman —a friend, incidentally, who is acquainted with your wife. Casually, one day, he says to your wife: "You know, Joe's been working awfully hard . . . looks terribly tired . . . the grind's getting him down." He lets this sink in. "Joe should relax," your buddy says, a tone of dark foreboding in his voice. Then, innocently, he asks your wife: "Is Joe a fisherman?" "Oh, yes, indeed, Joe loves fishing," responds your wife. That's the subtle beginning of the "buddy dodge." "Well," says your friend, "I think I'll drop in on Joe tomorrow—maybe we can go fishing and relax good old Joe." This is really a good system but we must be completely honest with you again and mention its disadvantages, too. Most wives will fall for this occasionally, but not forever. Sooner or later they tumble to it.

After all these so-called "systems" have run their course and failed—as they must eventually—you have one last resort. Go down to the sporting goods store and buy a license for your wife. This gets expensive, but, after all, she can row the boat, catch nightwalkers for you, light your cigars while you're busy casting—all sorts of helpful little things she can do. And, oh, one final caution: That rope you'll find in the stern of the boat. You tie that to the anchor—NOT you wife's ankle.—*Wisconsin Conservation Bulletin.*

BASS FISHING

Contrary to popular belief, some of the best bass fishing occurs during the hottest days. From late evening until dark, fish shorelines and around vegetation with surface lures. It often brings lunker bass out that have stayed close to deep holes during the hot, daylight hours.

A duck's visual equipment includes a transparent membrane which the bird can pull over its eyes while in flight.

Basement of the J. C. Penney store in Waverly marked the end of the trail for this young buck deer after it made an unscheduled "tour" of the store. Police officers bullets felled the deer before it could do more damage to basement merchandise.

* * * * * * * * * * * *

A CRAZY, MIXED-UP WORLD? DEER VISITS SHOE DEPARTMENT, MALLARD CHECKS INTO HOTEL

Two incidents of wildlife making unscheduled visits to the heart of business districts of two Iowa cities has made news in recent weeks.

At Waverly, a two-year-old deer was detected in the shoe department of the J. C. Penney store by police officers after a newsboy reported damage to the front door of the store on his early morning delivery rounds.

Alterted by the carrier, police entered the store and first spotted the young buck lying on the carpet in the shoe department. Bleeding badly from cuts he received in the collison with the front door, the young buck jumped up and bolted toward the back of the store, ending up on a merchandise chute which conveyed him, post haste, to the basement.

Fearing severe damage to merchandise in the basement, the police officers shot the animal and later delivered the carcass to the Lutheran Children's home in Waverly.

Most perplexing thing about the whole episode to Conservation Officer Bruce Parker of New Hampton was the fact that the young buck negotiated some mighty narrow aisles from the point of his entry to the shoe department where he was found—without jostling a single merchandise table or dislodging a single item of merchandise!

From Cedar Rapids comes the tale of a mallard hen that recently checked into a downtown hotel after a narrow "squeak" with a freight train.

According to one newspaper report, the duck swooped beneath the moving freight, landed on a grill, just outside a basement window of the hotel, and then—apparently seeking a haven in the dangerous world into which it had wandered—flew into the hotel.

"There's something moving around down in the maintenance room," a hotel maid told the hotel's engineer.

The hotel engineer investigated and found the duck in his shop room. A member of the sheriff's staff was summoned and he set out for the hotel with a burlap bag. Engineer and deputy captured the duck beneath a table in the corner of the shop room. Into the bag went the "wandering" mallard, and the deputy took her to the Cedar River where she was set free.

THE SPORTSMAN'S CODE

1. When I am a landowner's guest, I will treat his property as I would have my property treated.
2. I will join an organized club and support all activities of a conservation nature.
3. I always will be mindful of the dangers of fire, particularly to forests and fields.
4. I will not litter public lands and waters with refuse.
5. I will not participate in unnecessary mass slaughter of fish or wildlife.
6. I will abide by all hunting and fishing regulations and report any known violations to proper authorities.
7. I will leave a sufficient brood stock of fish or wildlife despite lawful opportunities to take more.
8. I will bend every effort to secure wounded or crippled wildlife.
9. I will avoid killing so-called predators in the thought that they may be friends that are valuable in maintaining Nature's balance.
10. I will take only that fish and wildlife I can use, even though more may be lawfully available.—*Game and Fish Commission of Tennessee.*

Deer Kill . . .

(Continued from page 145)

day, reduced the total harvest about 21% under the previous year. This, together with other factors, may have had some influence on the increased automobile kill.

Population, Gun Season and Deer Kill, 1951-56

Year	Winter Deer Population	Misc. Kills	Hunter Kills	Season
1951	6,897	192	none	closed
1952	10,721	256	none	closed
1953	12,982	393	3,508	3 days 45 counties
1954	11,892	310	2,700	3 days 65 counties
1955	10,674	306	3,400	3 days statewide
1956	10,811	419	2,666	3 days statewide

The following table lists the deer killed in various ways (except bow and gun hunters) by agricultural districts:

Agricultural District	Dogs	Autos	Illegal	Misc. Unknown	Total
Northwest	none	46	11	29	86
North Central	none	34	6	7	47
North East	none	37	6	3	44
West Central	1	22	none	9	32
Central	none	26	1	12	39
East Central	none	29	4	7	40
South West	none	22	2	15	39
South Central	none	38	3	12	53
South East	none	30	5	4	39
TOTALS	1	284	36	98	419

Two additional tables are included, namely a summary of deer killed (except by hunters) by counties, and a tabulation of those kills by months. An estimated tabulation of damage sustained by automobiles appears in the right hand column of the latter report.

SUMMARY OF DEER KILL IN IOWA FOR THE YEAR 1956

County	Dog	Auto	Illegal	Misc.	Total
Appanoose		4	1		5
Benton		3	2	1	6
Black Hawk		2	1	2	5
Boone		2		1	3
Bremer		1			1
Buchanan		1	1		2
Buena Vista		3			3
Butler		3			3
Carroll				1	1
Cass		2			2
Cedar			1		1
Cerro Gordo		3	1	1	5
Cherokee		5		4	9
Chickasaw		5			5
Clarke		5		1	6
Clay		8	2	3	13
Clayton		3			3
Dallas		6	1	4	11
Davis		1	1		2
Decatur		3		4	7
Delaware		1	1		2
Des Moines		1			1
Dickinson		2			2
Emmet		10	1	3	14
Fayette		10	1	1	12
Floyd		8	2	1	11
Franklin		1			1
Fremont		1			1
Guthrie	1	1			2
Hamilton				1	1
Hardin		4			4
Henry		1			1
Howard		6			6
Ida		2		1	3
Iowa		6		4	10
Jackson		8			8
Jasper		4			4
Jefferson		3			3
Johnson		3		1	4
Jones		1			1
Keokuk		3		1	4
Kossuth		8			8
Lee		3			3
Linn		3			3
Louisa		3	2		5
Lucas		4		4	8
Lyon		2	2	1	5
Madison		9			9
Mahaska		5	1	3	9
Marion		4	1		5
Mills		6	2	6	14
Mitchell		6	1	2	9
Monroe		3			3
Montgomery		5		5	10
Muscatine		4		1	5
O'Brien		6		2	8
Osceola		1		1	2
Palo Alto		1			1
Plymouth		6	6	8	20
Polk		5			5
Pottawattamie		8		4	12
Poweshiek				1	1
Sac		6		4	10
Scott		1	1		2
Sioux		2		7	9
Story		4			4
Union		1			1
Van Buren		4			4
Wapello		4			4
Warren		5	1	3	9
Washington		2	1		3
Webster		1		5	6
Winnebago		2			2
Winneshiek		8			8
Woodbury		13		3	16
Worth		2	2	1	5
Wright		1		2	3
TOTALS:	1	284	36	98	419

SUMMARY OF DEER KILL IN IOWA FOR THE YEAR 1956

Month	Dog	Auto	Illegal	Miscellaneous	Total	*Estimated Car Damage	
January		15	2	4	21	$ 1,290.00	(11)
February		8	1	1	10	45.00	(2)
March	1	13		2	16	900.00	(6)
April		15		3	18	1,090.00	(6)
May		20		8	28	740.00	(8)
June		24		3	27	3,625.00	(15)
July		14			14	680.75	(4)
August		10		4	14	255.00	(3)
September		29	4	5	38	1,520.00	(8)
October		39	8	40	87	1,870.00	(20)
November		72	17	25	114	7,095.00	(46)
December		25	4	3	32	1,984.00	(12)
TOTALS	1	284	36	98	419	$21,094.75	(141)

*The number in parentheses is the number of cars reporting damages.
There is an average damage of $156.70 per car.
Auto totals include deer killed by train.
Misc. totals include deer killed by agricultural operations. (mowers and combines)

Thermal . . .

(Continued from page 147)

mentioned here to keep the record straight for the scientist. Reason for the presence of oxygen deep in such lakes is the fact that the waters remain so cold that decay is retarded, this oxygen demand is low. Secondly, their oxygen supply in the depths could be replenished by bottom springs of high oxygen content.

"Fall Turnover"

As the chilling winds of autum, the accompanying shorter days and lessened heat of the sun occur, the upper layer of water is gradually cooled. It becomes denser and sinks, forcing warmer and less dense water to the surface. This action, aided by the wind, brings about a complete mixing of all the water of the lake, and is referred to by the limnologist as the "fall turnover." When this happens, the thermocline is lost, stratification ceases to exist, and oxygen is again found at all levels.

As fall moves into winter the water temperature continues to drop until it reaches the freezing point and ice forms over the surface of the lake. Here again may seem to be a contradiction, as it was just stated that as water cools it becomes less dense and sinks. It might be asked, how then does ice form on top of a lake and not on the bottom or at some other level?

Answer: As water near the surface becomes colder than 39.2 degrees, it becomes progressively lighter (less dense). Being lighter, it no longer sinks. It remains on the surface. Comparing this winter condition to the summer stagnation period, the temperature conditions are reversed. The warmer water is at the bottom, and the colder water on top, however, with respect to density, the conditions are still the same—the lighter water is on top. The lake at this time is in the "winter stagnation period." It also is referred to as inverse stratification, but falls far short of the stratification of the summer period because there is very little difference in temperature from top to bottom.

The amount of oxygen available to aquatic life may be reduced during the winter stagnation period because the ice cover removes the prospect of any wind disturbance and accompanying infusion of oxygen from the air. This condition is counteracted by a reduction in the activity of all life in the lake. Fish, like all cold blooded animals, decrease their general activities with lowered temperatures, thus they exert a lesser demand for oxygen than during the warm summer months. Also, decay of organic matter slows down in cold water, thereby lessening the oxygen demand of that process. While this oxygen demand is thus lessened, the passage of light through the ice enables the continued generation of new oxygen by the aquatic plants. Only if a heavy mantle of snow lies on the ice for any period of time, thereby shutting out light penetration, is this oxygen producing faculty reduced. It is when this happens along with unusual oxygen demand, that so-called winter kills of fish take place in a lake.

As winter gives way to spring, the ice cover breaks. The surface water gradually warms up. As its temperature approaches the 39.2 degrees at which water is the most dense, it sinks, forcing colder water to the surface. In short order, another complete mixing is effected, this one called the "spring turnover" and the cycle of the lake's changes with the season is completed.

Though much has been learned about thermal stratification, and the stages through which the waters of a lake progress throughout the year, limnologists agree that many things are yet to be learned. In fact, there is disagreement among them upon certain aspects of these changes and conditions that exist during stagnation periods. These aspects and conditions may be of scientific import, but to the fisherman, an awareness of stratification and the knowledge of the depth of oxygen bearing water is all he need have to aid him in his fishing and to enable him to guard against much futile effort.

Just how greatly thermal stratification affects fishing, however, is still open to question. A few studies made and catch records kept on TVA lakes and elsewhere seem to indicate that there is some correlation between thermocline and fishing success. It is just possible if these experiments are expanded and definite conclusions reached, that old question, "How are they biting?" may be replaced by "How deep is the thermocline?"

anoeing . . .

(Continued from page 145)

· the inexperienced canoeist that : have seen in traveling some)00 miles of Iowa streams. There fast water, some respectable pids, and even a waterfall. And t it isn't dangerous. There are a w places where the canoeist uldn't walk out with his head ove water in event of an upset. s an extra bonus, the country is ry scenic.

Only the fences detract from the easure of a float down the Shell ock. There are 69 of them by tual count between Albert Lea d Nora Springs — good strong es, some with electric "buzzers"

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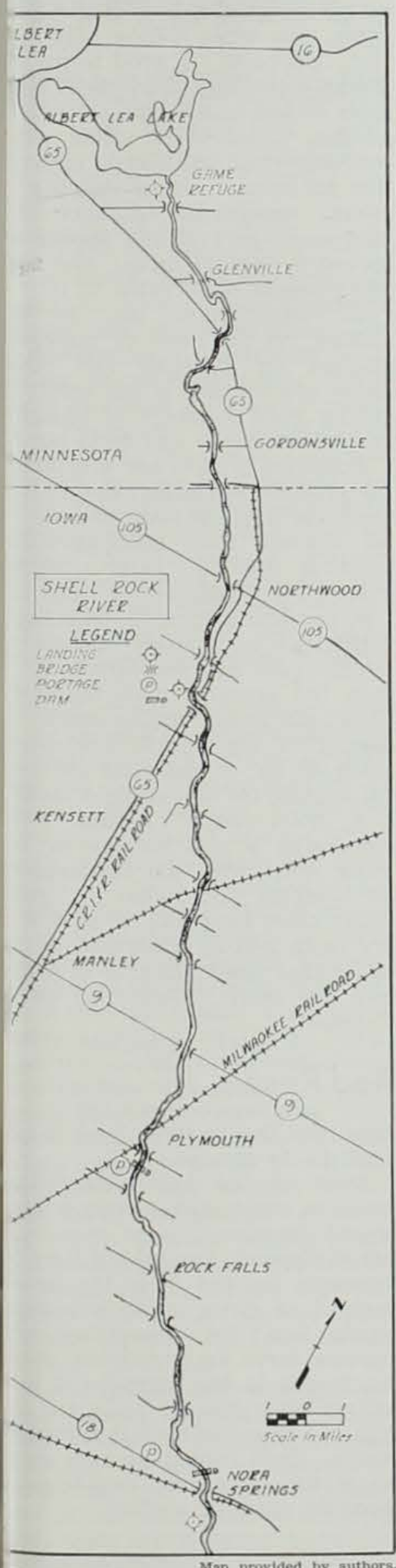

Map provided by authors.

This map shows the route authors took down the Shell Rock River from Albert Lea Lake to Nora Springs.

attached. When you have gone over, through and around them all, you will have "had the course" in climbing fences with a canoe. A "fence" technique is soon developed, however, and the barriers cause little real difficulty except to cut your traveling time considerably. It is wise to maintain a sharp lookout to keep from sweeping into a fence in a strong current before you have set your strategy for getting through it.

We made the trip from Albert Lea Lake to Nora Springs in two days, but we do not recommend that procedure to others. It took us 21 hours of actual traveling time, which is a long weekend if you have to drive a great distance home after leaving the river on Sunday night. Our traveling times from one point to another are shown below. These times will vary somewhat with the condition of the river and how hard you lean on the paddle. They will serve, however, as a means of selecting a put in place to fit your particular time schedule.

For the assistance of those who may wish to follow us down this beautiful little stream we are giving below a detailed log of our trip from Albert Lea Lake to Nora Springs, together with notes on a few things to watch for. The river distance is about 40 miles.

8:00 a.m. Saturday—put in below the dam at the outlet of Albert Lea Lake, on the right bank.

½ hour to first bridge.

1 hour to railroad and highway bridges at Glenville, Minnesota.

½ hour to next bridge.

¼ hour to Highway 65 and railroad bridges north of Northwood.

½ hour to next bridge.

1¼ hours to bridge at Gordonsville.

½ hour to west fork of Shell Rock, entering from right. The west fork originates in Twin Lakes.

¼ hour to next bridge.

½ hour to next bridge.

* * * * * *

Church and Allen photo.

Outlet of Albert Lea Lake where authors started their journey down the Shell Rock.

Church and Allen photo.

Broad expanse of the Shell Rock is an invitation to probe with the eye an unencumbered view far downstream and enjoy the beauty of Iowa's rich green countryside.

* * * * * * * * * * *

1½ hours to Highway 105 bridge west of Northwood, Iowa.

¼ hour to bridge south of Northwood business district. The river bends to the right around the city park. Watch out for the dam, 1 foot high, below park.

1 hour to next bridge.

½ hour to Highway 65 and railroad bridges south of Northwood.

We camped in open country downstream from the highway.

1¾ hours to next bridge. The character of the river changes; enters the limestone country.

½ hour to new highway bridge.

½ hour to highway and railroad bridges east of Kensett.

½ hour to next bridge.

½ hour to next bridge.

1¼ hours to Highway 9 bridge east of Manly.

2 hours to highway and railroad bridges at Plymouth. There is a small dam here. Portage on the right bank.

¼ hour to next bridge, also at Plymouth. Below Plymouth the banks are more heavily wooded, with lots of limestone outcroppings. The current is much stronger.

2 hours to the bridge at Rock Falls.

¾ hour to next bridge.

¼ hour to next bridge.

1 hour to next bridge.

¾ hour to dam and falls near Nora Springs. Portage on right bank.

½ hour to new Highway 18 bridge, old highway bridge and railroad bridge at Nora Springs.

6:30 p.m. Sunday—took out below the railroad bridge on the right bank, just rounding the bend below the bridge.

* * * * * * * * * * *

HERE'S CATFISH BAIT THAT SMELLS GOOD

If you're worried about the live bait situation, but are still catfish hungry, bend your good ear agin' the wind and listen:

Mix 1 cup flour, 1 cup corn meal and 10 tablespoonfuls of thick molasses. Mix into stiff dough and roll into bait balls. Drop into boiling water. Boil 10 minutes. Remove and drop into cold water. This is a sweet tooth catfish bait and stays on the hook. Your skillet will smell fishy if you give this bait a good try.—*South Dakota Conservation Digest.*

FIRST AID FOR GUIDES

A few safety-pins are handy to have in your tackle box. If you break a rod guide, cut a safety-pin above the snap end. Then, bend the two salvage ends to form supporting "feet" for the "eye" of the pin. Wrap it on the spot with fishline or with scotch tape. This emergency repair will see you through the day and until you get home for a more professional winding job!

GEESE

The flight of the Canada goose is heavy but powerful. It averages about 55 miles per hour. To cut down air resistance, Canada geese usually form a V-shaped flock. These magnificent migrators sometimes negotiate a non-stop flight of hundreds of miles.

Education holds the key to better water safety. Here a demonstration before youngsters points up cardinal rule of boat safety—stay wih your craft and relax until help arrives.

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Safety . . .

(Continued from page 145)

creation of the Water Safety Congress.

Efforts Educational

Efforts of the Water Safety Congress are largely educational in nature and it is difficult, if not impossible, to evaluate them. Who, for example, can say how many people were saved from water deaths by instructions they read, heard or saw as a result of information distributed by the Congress or the hundreds of interested people comprising it?

The National Safety Council reports that the number of drownings as related to population is declining. The average number of annual drownings in the U. S. for the years 1903-1912 was 9,000, or at a rate of 10.2 per 100,000 of population. By 1948, the number of drownings in the U. S. had declined to 6,500 for a rate of 4.5. In 1954, the number was 6,200 for a rate of 3.9. This record, it should be pointed out, was achieved despite the creation of many new water areas enjoyed, by a population with more and more leisure time. Were it possible to calculate the drowning rate on a usage basis, the decline in drownings probably would be even more striking than the previously quoted figures indicate.

What is the answer? The Water Safety Congress believes a strong, sustained educational program will produce the best results.

Local Groups

It would appear that local organizations should be best fitted to combat local problems. Most communities, for example, have local representatives of organization already embarked on water safety programs on national, regional or state scales. These groups are the American Red Cross, Boy and Girl Scouts, Outboard Boating Club of America, recreation departments of city or county or state governments, the U. S. Coast Guard and its Auxiliary, U. S. Power Squadrons, Boys' clubs, YMCA, YWCM, YMHA, schools and colleges, etc. With members of these organizations as a nucleus, a water safety program can be developed using participation of such other interested groups as community safety councils, civic clubs, conservation and/or game and fish departments, police and fire departments, federal agencies, news media such as press, radio, TV, etc. Once such a local organization is functioning, there is much it can do in the way of presenting demonstrations, developing learn-to-swim campaigns, practicing rescue methods, preparing and distributing literature and even considering suitable legislation, if deemed necessary.

A formidable list of "do's" and "don'ts" can be used as guides for water safety. Actually, however, these rules boil down to the use of plain old-fashioned common sense. After all, safety is sensible!—*Commodore Clay Clifton, U. S. Coast Guard, President Water Safety Congress in Virginia Wildlife.*

Bluegills . . .

(Continued from page 148)

will work nicely for bluegill fishing. (Level lines are the same diameter for the length of the line; double-tapered lines are the same diameter for several feet in the middle of the line tapering to smaller diameter at each end.) Since it is sometimes necessary to reach considerable distances fishing for bluegills, however, a double-tapered line is perhaps favored by most fishermen. Level lines simply won't get the distance you sometimes want.

I would suggest you dress your line often—before you go out, at least, and, if you fish long hours at a stretch, a couple of times during a long day's fishing. Dressing adds years to your line and, most important, it will "shoot" farther and easier.

One very definite requirement for successful bluegill fishing is a healthy supply of light leaders. The finest tapered leaders in the smallest tippet test that you can buy or make up will put more bluegills on the stringer. A great many anglers use the same finely tapered leaders for bluegills that they use in fishing for such wary fish as trout, testing down to a pound and less. Use of fine leaders is another indication that the bluegill is not completely lacking in intelligence and that "snookering" him into a strike often depends upon whether a lure is presented in lifelike manner or the fish is "spooked" by a large leader that is plainly visible.

A light leader, in my estimation, also enables the fisherman to get the utmost from the sport of bluegill fishing. For awhile the success of the angler is enhanced by use of a finely tapered leader in the first place, a degree of fishing skill in bringing the fish to the net also is brought to the fore. A light leader will not stand the exertion of much muscle on the part of the angler and places the battle at the tip of the flyrod where it should be for top sport. And, because of the light test of the leader, the contest between the angler and his opponent is more nearly equallized hence the catch is even more rewarding.

Ever examine a bluegill's mouth? It holds a clue to the most effective lures for catching him. His mouth is small, indicating that he is primarily an insect feeder. Dry and wet flies and small "poppers" that resemble insects living on, falling on, or resting on the water, are his downfall.

Although it may be true that bluegills are top sport on top water lures such as dry flies and small "popper" they are by no means the only way to take them. Wet flies are productive in early spring, during the summer months when the bluegill has moved to deeper water, and on into the fall. Early morning and evening fishing with topwater lures, especially small "poppers," probably represent top sport for most bluegill anglers.

Any discussion of bluegill fishing would hardly be complete without some information about where to find him and something about methods that will make fishing for him more productive.

Location of bluegills in a lake or pond is a simple process when the water's surface is becalmed. The circle or "dimple" created by the feeding bluegill as he rises to capture surface insects in a familiar sight to nearly all anglers. Usually witnessed during early morning or evening hours, this is the signal for the alert bluegill angler to tie on a small "popper" or dry fly and get the stringer ready for business that comes fast and steady. Whether the angler is fishing from a boat or wading, casts will be made to the area of the "rises," retrieving the "popper" or fly with a series of short jerks simulating the movement of a swimming insect.

Although lacking in "tell-tale" evidence as was the case with surface-feeding bluegills, the angler will find fish in the same habitat during wet fly times of the season. Fish shorelines and around the edges of weed beds and plant growth with wet flies when bluegills are "down under." Method of fishing the wet fly is the same—retrieving the lure in quick jerks.

A good method which seems to impart just the right amount of action once the knack of it is learned is to take the line between the thumb and first finger of the right hand while maintaining the grip on the rod with the other three fingers. As the line flows through the thumb and finger of the right hand, grasp the line with the left behind the right and "jerk" the line in a quick succession of these actions. The tip of the rod can also be used to help give the proper action of duplicating a choice tidbit moving through the water.

It would seem only logical in a discussion of lures and methods most effective for bluegills to recognize the extra "bonus" fishing for the species sometimes brings the angler. Because largemouth bass nearly always share the same water with bluegills a good many are taken by the fisherman intent on catching bluegills. This is most often true when fishing with surface "poppers." A good many anglers, including the writer, have been rocked to the boot soles by a sudden, vicious bass strike while concentrating on bluegill fishing. For my money, the probability of taking bass under these circumstances is part of the appeal involved in bluegill fishing and adds something a little extra to it.

Of importance, too, is the "bonus" in the form of improved angling for bluegills and other game species that is the result of taking good numbers of bluegills from Iowa lakes and farm ponds.

Fisheries experts say that keeping bluegill populations down helps maintain a more ideal balance of all species, thus insuring more growing room for all, a better chance for production of more big fish, and less chance for "stunting" conditions to develop because of overcrowded fish populations.

In the previous paragraphs we have discussed requirements of fishing for the bluegill, and something of the methods for successful angling for him on light tackle.

A good many Iowans have discovered a new horizon in angling sport with the combination of bluegills and flyrod. A good many more have only to give it a try to be just as confirmed in the belief that Iowa bluegills on a flyrod are truly: "Dynamite on a Cobweb!"

Rod Repair . . .

(Continued from page 146)

hour, and then you're all set to get back to the stream.

Most of the above difficulties could be eliminated if every angler would exercise a bit of care with his equipment, like taking time to untangle his rod from the brush instead of giving it an impatient yank. Don't let these temporary repairs serve as permanent ones. Hotfoot it to the nearest rod mechanic when you get home and let him put your rod back in topnotch shape. Good fishing gear in good shape will add a great deal to your favorite sport of angling.

The carp, a native of Asia, was introduced in the United States in 1872.